



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re : Application of Roesgen  
For : **FABRIC UNDERLAY FOR IMPROVING TREAD  
CIRCUMFERENTIAL AND MERIDIONAL RIGIDITY**  
Serial No. : 09/719,705  
Filed : 12/13/2000  
Group Art Unit : 1733  
Examiner : Knable  
Our Docket No. : DN1998090USA

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**ADDITIONAL SHEET(S) SHOWING  
AMENDMENTS MADE TO THE SPECIFICATION  
(OTHER THAN TO THE CLAIMS)**

Replace the paragraph at page 8, line 20 – page 9, line 5

During the manufacturing process of the tire of the present invention, the fabric underlay is installed as a helically or circumferentially wound, cord-reinforced ribbon upon a blown-up green tire carcass. Subsequent to the application of wrapped fabric overlay, the [gren] green tire carcass is blown up to engage the belt structure and the tread to form a completed green tire. The edges of the spirally wound ribbon might overlap during installation, or they can be butt joined, i.e., without overlapping. The reinforcing cords of the helically wound ribbon are oriented at an angle of about 0 degrees to about 5 degrees with respect to the equatorial plane of the blown-up green tire carcass to prestress the reinforcing cords in tension. The completed green tire is then blown up in the curing mold.

Replace the paragraph at page 15, line 19 – page 16, line 12

With reference to FIGURE 1, a cross section of a prior art, low-profile, pneumatic radial runflat passenger tire 100, as disclosed in U.S. Patent Application Serial No. [08/805,489] 08/865,489 (now USP 5,871,600), having a common assignee with the present invention, and which is incorporated in its entirety herein, is illustrated. The tire 100 has a tread 120, a belt structure 160, a pair of sidewall portions 180,190, a pair of bead regions 220 and a carcass structure 250. Belt structure 160 consists of two belts 500,520 and a fabric overlay 540 deployed between the bottom portion of tread 120 and the upper parts of the belt structure. The carcass 250 includes a first ply 300 and second ply 400, a gas-impervious liner 340, a pair of beads 260, a pair of bead filler apexes 440, a first pair of inserts 460 and a second pair of inserts 480. The first or innermost insert 460 is located

between the inner liner 340 and the first ply 300, and the second insert 480 is located between the first ply 300 and second ply 400. Fabric overlay 540 is disposed beneath or radially inward of tread 120 and on top of, or radially outward from, belt structure 160. The reinforced sidewalls of carcass structure 250 gives the tire 100 a limited runflat capability

Replace the following paragraph, at page 28, line 24 – page 29, line 6

The circumferential tread stiffening benefits of the circumferentially oriented reinforcing cords 62 of the fabric underlay 60 (as shown in FIGURE 4A) derive from the manufacturing process during which the fabric [overlay] underlay is deployed upon the tire in such a way that causes the reinforcing cords to be prestressed in tension. Referring to FIGURE 8D, the tensile-prestressed cords (not shown) in the fabric underlay 60, by virtue of being prestressed in tension, are more readily able to resist the additional tensile stresses associated with the sort of upward buckling of the tread 12 as such buckling is shown in FIGURE 6C.

Replace the following paragraph, at page 29, line 28 – page 30, line 15

The fabric underlay 60 is applied upon the green carcass after the blow-up process on a conventional tire building drum. The blow-up process [as] is well known in the art. That is, the fabric underlay is applied to the green carcass after the carcass is initially blown up but prior to being "blown-up" into the belt and tread. There are two methods by which the fabric underlay 60 can be applied upon the blown up green carcass. The first method is to apply the fabric underlay 60 as a single "ply" having approximately the width of the tread. In this first method of installation, the reinforcement cords are inclined between about 0 degrees and about 30 degrees with respect to the equatorial plane EP of the tire, preferably between about 0 degrees and about 20 degrees with respect to the [equitorial] equatorial plane EP, and most preferably at about 0 degrees with respect to the equatorial plane EP.

Replace the following paragraph, at page 30, line 28 – page 31, line 4

A blow-up of the completed green tire takes place in the curing mold. This final blow-up, which has an amplitude of about 2 percent of the tire's diameter, provides the required pretension or prestressing of the reinforcing cords 62 of the final fabric [overlay] underlay 60.

Replace the paragraph at page 37, lines 7-18

Referring to FIGURE 2, there is illustrated a first embodiment of the invention incorporating a runflat radial ply tire 10 as described in the above specification but having ones of its radial plies 30,40 reinforced with essentially inextensible fibers or cords made of metal such as steel, as disclosed in the Application Serial No. 08/865,489 (now USP 5,871,600) and in which the aspect ratio of the tire can be low or high or intermediate between the maximum and minimum values of aspect ratios, i.e. between about 30 percent and about 80 percent for runflat passenger tires. Such an embodiment would have potential for runflat use in high-performance sports type vehicles or light trucks.